

specific name to "harenarius," and to treat of the "umerus" instead of the "humerus" in our textbooks of anatomy, we can not, with any consistency, admit Illiger's emendation of *Altica*.

The writer is one of those entomologists who does hope that ultimately we may recover a stable nomenclature, and for that reason he still finds himself in cordial agreement with the opinion which Allard expressed so many years ago. "It seems to me," he wrote in discussing the *Altica-Haltica* problem, "that the orthography of the word should be determined by priority, and since Geoffroy in 1762 and Fourcroy in 1785 wrote it with an 'a,' with Latreille we must respect their right of invention and omit the 'h'" (*Ann. Soc. Ent. Fr.*, 1860, ser. 3, t. 8: 41).

OBSERVATIONS ON THE OCHTERIDAE.

BY PROF. R. TAKAHASHI.

[English Résumé by the author of the original Japanese in *Trans. Nat. Hist. Soc. Formosa*, Vol. XI, No. 55, pp. 119-125 (1921).]

Very little has been published relative to the habits of the family Ochteridae and the writer made these observations on *Ochterus formosanus* Mats., which is not uncommon in Formosa:

(1) The adults live upon the sandy shores of ponds or streams, where the color of the backs merges into their surroundings, rendering them difficult to discern. They are not able to submerge, and do not run out upon the water, where they are sometimes found by accident, but the nymphs are amphibious, being often seen submerged.

(2) The adults are very active, although the nymphs are rather inactive. The death-feigning habit has never been observed.

(3) The species is not gregarious, but two or three nymphs are sometimes found in groups.

(4) The nymphs sometimes vibrate their abdomens vertically a little for a few seconds when resting on the shores.

(5) The nymphs cover their backs completely with sandy granules. All the instars have this habit. Their heads are provided, on the front, with 12-14 short, stout processes, projecting forward and arranged in a transverse row, with which they scoop the sand upon their heads and push it backward with the front legs.

(6) The nymphs construct for themselves small cells of sand above the ground, employing frontal processes, in which the molts take place.

(7) The nymphs, with wettable dorsum, are amphibious in habit, being often found submerged. When submerged, the bodies are always held just below the surface film, and they swim rather awkwardly, moving all the legs, but do not swim deeper. A store of air for respiration when submerged is carried below by the insect on the under surface of the abdomen; and the nymphs now and then lie back down, exposing the lower surface of the abdomens into free air to take in a new supply of air. This act is very quickly done.

(8) The mating habit is almost as in *Microvelia*, but the males do not remain on their mates for a long time when copulation is finished.

(9) The eggs are placed singly upon the sandy granules, or upon the decayed leaves on the shores.

(10) The egg is similar in structure to that of *Gelastocoris* figured by Dr. Hungerford (1919), measuring about 0.7 mm. in length.

(11) There are five nymphal instars, as is common for many Heteroptera, and the nymphal stages last more than one month.

(12) In the adults, the front and middle tarsi are 2-jointed and the hind 3-jointed, while in the nymphs all the tarsi are always 2-jointed.

(13) The adults may be seen at any season throughout the year in Formosa.